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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,250	08/03/2001	William Laird	M0459/7021 DW	9145

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EXAMINER

YAN, REN LUO

ART UNIT PAPER NUMBER

2854

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/923,250

Applicant(s)

LAIRD ET AL.

Examiner

Ren L Yan

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 38-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

Applicant's election with traverse of Group I, claims 1-37 and 45 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that a single search and examination covering all claims would not place undue burden on the Examiner. This is not found persuasive because applicant failed to specifically point out why a single search would cover both the apparatus and method claims in both groups. As pointed out in the restriction requirement, the process as claimed can be practiced by another materially different apparatus. Accordingly, the search for the process group claims would have to be extended into other areas where the process can be practiced. Therefore, the search for the process group claims would be more extensive than the apparatus group claims.

The requirement is still deemed proper and is therefore made FINAL.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 30-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The recited limitation in the last 5 lines of claim 30 that "at least a portion of the stencil stabilizer extends, when the stabilizer is not in contact with the inner surface, to a location separated from the longitudinal central axis of the conduit by a first distance, said first distance exceeding a second distance separating the

Art Unit: 2854

nozzle from the longitudinal central axis of the conduit” was not described in the specification, nor was it illustrated in the drawings.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19, 25-29, 37 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitter(4,497,249). The patent to Mitter teaches a system for air embossing a surface of a substrate as claimed including a cylindrical stencil 1 and at least one stencil stabilizer 2, 3'', 3a' or 3a'' constructed and positioned to apply a force to the stencil during the operation to prevent deformation of the stencil so as to reduce variations in a distance separating the surface of the substrate and a portion of the stencil surface directly adjacent the substrate surface. The above identified stencil stabilizers are positioned to apply a force to the inner surface of the stencil to ensure the distance between the surface of the substrate and the stencil surface remains substantially the same. See Figs. 11-14, and column 9, line 61 through column 11, line 54 in Mitter for details. Regarding claims 5 and 6, when the stabilizer of Mitter contacts the inner surface of the stencil at the lowest point of the stencil where it meets the substrate, it would inherently create a certain degree of tension and distortion in the stencil at that point. With respect to claims 8-13 and 25-28, Fig. 12 of Mitter shows that an air lance 55 with nozzles for supplying air or gas through the stencil is integrated into the stencil stabilizer 2. with respect to claims 14 and 15, the distance between the nozzle and the inner surface of the stencil in Mitter is

Art Unit: 2854

self-adjustable based on the force applied to the outer surface of the stencil by the substrate and the counter pressure member on the other side of the substrate. Since the stabilizers 3''', 3a' or 3a'' are generally flexible and will flex under force, they will certainly adjust their positions based on the forces under which they operate. Additionally, when they flex, the resistance to being flexed increases and therefore, the level of force they apply to the inner surface of the stencil would be inversely proportional to the distance separating the nozzle from the inner surface of the stencil. Regarding claims 17 and 18, Mitter teaches in Figs. 11-14 the use of two stabilizers, one located upstream of the nozzle and one located downstream of the nozzle as recited. Regarding claims 19 and 29, the recited first and second distances are inherent features of the apparatus taught by Mitter. With respect to claim 45, see also Figs. 11-14 in Mitter for details.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitter(4,497,249). Mitter teaches all that is claimed except for the recited differences in dimensions between the first and second distances. It is noted that the recited differences between the two distances span over a huge range from 0.001 inch to 0.1 inch with the top limit 0.1 inch exceeding the lower limit by 100 times. Due to the lack of disclosure showing any criticality and since a wide range of the differences between the two distances would equally work well, it would have been obvious to one of ordinary skill in the art to select the materials

Art Unit: 2854

for the stabilizers of Mitter so that they would perform within the recited range or perform the way as desired to achieve an expected outcome.

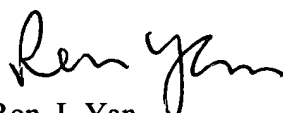
The following is an Examiner's statement indicating allowable subject matter:

The claimed air lance apparatus in claim 30, including the required structural arrangement and particularly the requirement that a portion of the stabilizer extends, when the stabilizer is not in contact with inner surface of the stencil, to a location separated from the longitudinal central axis of the conduit by a first distance which exceeds a second distance separating the nozzle from the longitudinal central axis of the conduit, is not taught by the prior art of record. Therefore, if the above rejection under 35 USC 112 first paragraph is overcome in the next response to this Office action, claims 30-36 would be allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L Yan whose telephone number is 703-308-0978. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 703-305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Ren L Yan  
Primary Examiner  
Art Unit 2854

Ren Yan  
August 10, 2003